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THE JOURNAL

of the

OKLAHOMA STATE MEDICAL ASSOCIATION

EDITORIALS

THE NEW VETERANS ADMINISTRATION HOSPITAL AND THE MEDICAL SCHOOL

In view of what has been said of the University of Oklahoma Medical School, this is "V. A." meaning "very apropos". Clarence E. Bates, M.D., Manager of the V. A. Hospital is a graduate of the Medical School. It is fitting that he should preside over the opening of the great V. A. Hospital adjacent to his alma mater and help to negotiate the plans for effective cooperation and affiliation in the care of the sick and the pursuit of medical education. Though this 10 story, 496 bed, completely appointed hospital might well be considered an adequate medical center within itself, it becomes a unit in the University Medical Center.

Because of this affiliation with a large staff of consulting specialists from the Medical School faculty, this hospital will attract problem cases and thereby augment its educational values for both graduate and undergraduate medical students. This feature of the affiliation significantly advances the cause of clinical research.

In keeping with the cooperative plan, for the time being Doctor Bates plans to open only 260 of the 496 beds. When the move from the Will Rogers Field is accomplished, this number can be staffed with very few additional employees, thus avoiding serious immediate competition in the employment of hospital personnel.

In a personal communication Doctor Bates says, "It is the desire of Admiral Boone and the staff to render the best possible care to the disabled men and women who served our country in time of need; also to work in close affiliation with the University to make this a great treatment and teaching center". May this desire be fully realized through the advancement of scientific medicine.

SCHOOL HEALTH IN ACTION

If anything in the realm of human welfare is more important than school health, it is family health, especially for the child of pre-school age. Physicians who help bring children up to school age in good physical condition should be vitally interested in school health and the accepted requirements of a well rounded school health program. Dr. C. M. Bielstein, chairman of the State Medical Association School Health Sub-Committee, says that such a program should consist of "healthful environment, health education, and health services".

It is obvious that such a program to be successful must have the individual interest and support of all parents, teachers and physicians. Also it must have the collective cooperation and support of community agencies interested in public health and community welfare.

With these facts in mind the State Health Department, the Oklahoma Board of Education, the Oklahoma Advisory Health Council and the State Medical Association Sub-Committee on School Health have cooperated in the production of a sound film entitled "School Health in Action". As a means of visual education this picture should be a great success. Every person in the State should see it. The picture was well planned; the theme is well presented with sustained action carrying conviction. "Seeing is believing".

Every member of the State Medical Association should see and believe and cooperate in community plans to give the film a wide showing. Parents, physicians and teachers should see that every school district is converted into a community of believers.

There is no better way than to arrange for a showing of "School Health in Action". Congratulations to the State Health Department and the cooperating agencies.

AT YOUR SERVICE

Regardless of what you think of the University Hospitals and the University of Oklahoma School of Medicine, these figures should catch your eye and command your consideration. They are lifted from the *Roundup at the University of Oklahoma Medical Center*: "9,801 discharged inpatients spent a total of 131,189 days in University Hospitals . . . 1,596 babies were born during the year . . . There were 77,994 patient visits in the outpatient department. (This does *not* include treatments for X-ray therapy, physical therapy and health service.) 9,946 treatments were administered by health service. Clinical patients represented all 77 Oklahoma counties."

To one familiar with human nature in the cross section, these figures arising from Oklahoma's melting pot of human frailties, both physical and psychological, suggest misunderstandings, critical attitudes and forthright complaints. To one who has been Dean of the Medical School and Superintendent of the University Hospitals, such complaints may be real or imaginary. Regardless of their origin, they pose ominous potentialities They may act as an evil ferment or like a devastating fungus, they may spread over the culture media prepared for the growth of confidence and extend to legislative halls where appropriations for state institutions must be considered.

This may seem a far cry from the realm of the hospital administrators where the blow first falls with ominous force, but it is directly in the channel worn smooth by our human frailities.

This is not surprising when one takes into consideration the fact that according to general averages, every patient applying for services has a family of five, a number of friends and neighbors and acquaintances running in the hundreds. What a rich background for criticism and resentment especially when human weal is the issue and a tax supported institution designed for service is the alleged offender.

In any given year it would be impossible to handle 20,000 patients and a hundred thousand anxious, immediate relatives plus friends and acquaintances without a complaint. This would amount to the millennium with the closure of all hospitals. But the hospital administration and the professional staffs canot hide behind this universal manifestation of human weakness lest they expose their own shortcomings.

Applying the all inclusive concept of the art of medicine to this situation, one can imagine great improvement through well planned and carefully supervised public relations. This is most difficult because it involves not only the first contact at the admission desk but it runs the whole gamut of the patient-hospital relationship. It amounts to the patient-physician-nurse-technician-physical therapist-social service worker-student-orderly relationship.

Always to have at the front the proper person with personality traits equal to every occasion in the course of such human relationships presents an insurmountable task, an administrative impossibility. On the other hand, one wonders if sufficient attention is given to the selection of employees who must occupy the strategic points in the important field of patient-hospital relationship. While it would require genius on the part of the employees to successfully cope with every issue, the patient exercise of talent should serve as an effective solvent.

Perhaps the budget fails to provide for the employment of genuine talent.

Briefly, this discussion presents a few problems connected with a state agency which should have careful, comprehensive and charitable consideration not only by university and hospital authorities but by every citizen in the state. The University Hospitals were built by and for the people. They are answerable to the people. As heir apparent of the people, they demand mutual responsibility and cooperation.

OKLAHOMA STATE HOSPITAL ASSOCIATION
TULSA, MAYO HOTEL,
NOVEMBER 10-13

Scientific Articles

RESUSCITATION OF THE NEWBORN INFANT

ALLAN BLOXSOM, M.D.
HOUSTON, TEXAS

The problem of resuscitation of the asphyxiated newborn infant is unique[1]. One is not only concerned with the function of a lung that must operate efficiently very shortly after delivery for continued survival, but a time limit is superimposed under which adequate oxygentation must occur and continue to prevent serious nervous system changes later in the infant's life. Added to this is the fact that 50 per cent of resuscitations of the newborn infant have to be made on the premature infant who fortunately constitutes only five to seven per cent of all deliveries.

OXYGENATION OF INFANTS IN THE AIR LOCK

Weights	Number	Living	Dead
499 to 2500 grams	125 (51 per cent)	81 (65 per cent)	44 (35 per cent)
2501 to 5000 grams	121 (49 per cent)	114 (95 per cent)	6 (5 per cent)
Total	246 (100 per cent)	195 (79 per cent)	50 (21 per cent)

Premature Infant Delivery Rate 6.74 per cent

Best and Taylor[2] state that the methods of resuscitation effective in the adult are likely to fail in the newborn infant. The reason for this failure lies in the fact that the newborn infant's alveoli have failed to expand, and to provide him with a pathway of oxygenation and de-carbon dioxidination. Primarily oxygen must be made available to the infant's foetal hemoglobin and tissue cells, and carbon dioxide removed across all available tissues and all function alveolar capillary[4] membranes. Eastman[3] correctly states that "there seems to be only one urgent indication in the treatment of asphyxia neonatorum, and that is to introduce oxygen into the circulating blood of the infant."

Behind the physiological curtain of a considerable degree of cyanosis[4] consisting of an average mean capillary unsaturation of more than 6.5 volumes per cent of oxygen in which the foetus exists in utero normally before becoming "a poor player that struts and frets his hour upon the stage and then is heard no more", exists what is believed to be an extremely valuable mechanism in initiating respiration in the newborn infant.

At this time the purpose of labor is believed to be two fold[5]. That which is most obvious is the birth of the infant. The hidden and very useful purpose found in the the prelabor contractions and pressures generated by foetus[5] to start his respirations promptly and to reshape the low cuboidal cells lining the alveolar sacs[7] to enable the alveoli of the lung to function adequately.

The full mechanism of conditioning the foetus by the mother by pressures developed at labor is (a) a variation of the pressure gradients of oxygen and carbon dioxide to condition and stimulate the respiratory center (a warm engine always starts better than a cold one), (b) a washing in and out of amniotic fluid by a minute tidal wave in an effort to prevent atelectasis at birth by a predelivery expansion of the alveoli in fluid, which is always easier, and (c) a flattening of the low cuboidal cells of the alveolar sacs by pressure in order to favor gas exchange across to the foetal hemoglobin, and to provide further, a means to maintain pulmonary pressure in the newborn infant's lungs. The above chain of events opens the short second act in the newborn infant's life during labor of the mother and should be considered the initiation of his "operation oxygenation".

The problem of resuscitation of the new-

*Presented before the General Session at the Annual Meeting of the Oklahoma State Medical Association April 13, 1953.

born infant therefore shapes itself into using the steps found in nature if a high degree of success is to be expected. The use of unphysiologic tracheal catheters and mechanical resuscitators condemned by Best and Taylor should be eliminated. The goal of every resuscitation effort must be to load the foetal hemoglobin of every anoxic infant with as much oxygen as possible, and to siphon off enough carbon dioxide to enable the respiratory center of that infant to function.

By varying the diffusion gradients of oxygen and carbon dioxide the Air Lock enables the asphyxiated newborn infant to move across all available surfaces oxygen and carbon dioxide. In addition pressures are provided to alter the shape of the low cuboidal cells lining the alveolar sacs to provide a more efficient functioning mechanism for respiration.

The normal rates of oxygenation of the newborn infant given by Crehan, Kennedy and Wood[8] are as follows:

RATES OF OXYGENATION OF NEWBORN INFANTS

Time after Delivery	Oxygen Saturation
5 minutes	67.3 per cent (Range 31 to 92 per cent)
17 minutes	89 per cent (Range 64 to 100 per cent)
2 hours	94.3 per cent (Range 90 to 99 per cent)

Total 102 normal infants

In comparison to the normal rate of oxygenation of the newborn infant, there is given in the following Table the rate of oxygenation of a handicapped newborn infant processed in the Air Lock. This chart was made by an anesthetist using an experimental Air Lock equipped to study the enclosed infant by means of an infant oximeter.

It required approximately three minutes to adjust the ear piece of the infant oximeter. After cycling in the Air Lock for six minutes (nine minutes after delivery) the oxygen saturation of the blood rose to 65 per cent. At this level the infant made his first respiratory movement. During the next 11 minutes respiratory movements were irregular, but the oxygen saturation of the blood rose to 104 per cent, showing how marvelously efficient the pulmonary tree is in oxygenating the blood when only a few alveolar sacs are expanded. It is reasonable to assume that this infant had some time purchased for him by the Air Lock in order to enable him to initiate his respirations and to fully oxygenate his blood. He was blue as ink when first placed in the Air Lock. The Air Lock is believed capable of increasing the oxygenation of the handicapped newborn infant to a point where the respiratory center can funcion and allow that infant to carry on if he is able. The forces that oxygenate the infant act in a like manner to move the excess carbon dioxide from the infant by rocking the diffusion gradients of this gas in the infant's blood.

It is believed that the asphyxiated newborn infant can absorb considerably more than 10 per cent of his oxygen requirements through his skin. It is known that 10 per cent of the oxygen requirements of the young adult can be absorbed by diffusion through the skin and upper respiratory passages when that adult is unclothed and surrounded by an atmosphere of 100 per cent oxygen[9].

It has been thought that many of the asphyxiated infants could not breathe because of the presence of a tracheal or bron-

OXYGEN SATURATION READINGS OBTAINED BY INFANT OXIMETER ON INITIATION OF RESPIRATIONS BY APNEIC INFANT BEING OXYGENATED IN THE AIRLOCK

Mother — Eclamptic — Total sedatives over 36 hours

Morphine sulphate	2 grains	
Meperidine hydrochloride	200 mg.	
Paraldehyde	30 cc	
Phenobarbital sodium	25 grains	
Minutes after delivery	Oximeter Readings in per cent Saturation	
3 (adjustment oximeter)	15	
5 (In Air Lock with cycling)	50	
6 (Infant made initial gasp)	50	
7	65	
9 (Infant breathing irregular)		
	Pressures in Air Lock	
	3.5 lb	3 lb	1 lb
9	77	83	
10	75	86	
14	83	94	96
16	86	95	95
20	87	97	104

chial plug of mucus or fluid, and that the use of a tracheal catheter or a bronchoscopic examination, with the subsequent removal of the plug and the carrying of oxygen down the trachea would be of value. However Potter[10] states that "The presence of excessive amounts of amniotic fluid within the lungs at the time of birth is of little consequence and does not interfere with the entrance of air. The rich capillary bed of the alveolar walls absorbs fluid rapidly, and air probably enters as easily as if the excessive amounts of fluid had not been inspired."

The following table shows a series of term and premature infants processed in the Air Lock, and the incidence of fluids expressed by those infants during the process of oxygenation.

The term infant brings up fluids in 12 per cent, and the mortality rate is the same in the group bringing up fluids as it is in the group not bringing up fluids. The premature infant brings up fluids in 30 per cent. The mortality rate of the premature infant who brings up fluids is 21 per cent, whereas it is 41 per cent in the premature group that does not bring up fluids. This is suggestive that the expression of fluids in the premature infant has a most favorable effect on the outcome of that infant. It also points to the fact that any detergent or wetting agent containing a lipophyllic fraction to act on the miscid material in the pulmonary tree would be of immense value to the premature infant.

At the present time the Air Lock by the expansion of gases in the terminal bronchioles and alveloar sacs in conjunction with a detergent or wetting agent provides the best practical method of removing pulmonary fluids. The quantity of these fluids varied from a few cubic centimeters to fairly large amounts. For the most part the fluids were clear and frothy, but in a few instances they appeared to be muco-purulent. Two infants expelled blood tinged mucus, one infant having been initially worked on with a tracheal catheter.

The following table shows the advantages that can be expected from positive pressure oxygen air oxygenation of the asphyxiated newborn infant.

ADVANTAGES OF CYCLING POSITIVE PRESSURES IN ASPHYXIA NEONATORUM

1. Promotion of bronchial drainage by the expansion of gases in the pulmonary tree for the expression of fluids and secretions.
2. Provision for a more uniform alveolar aeration.
3. Increasing the absorption of oxygen through the skin and upper respiratory passages.
4. Relieving and protecting against atelectasis.
5. Providing a gentle breathing exercise.
6. Combating acute pulmonary edema.
7. Providing favorable conditions for the diffusion and use of oxygen by the asphyxiated newborn infant.
8. Providing favorable conditions for the diffusion and elimination of carbon dioxide.
9. Dispensing with the handling of the infant on the part of the physician or nurse.

In a group of 24 infants in a series reported[11] subjected to tracheal catheterization, expansion of gases in the Air Lock removed fluids in only four. In the group of 23 infants from which fluids were removed by expansion of gases in the Air Lock, the tracheal catheter was used but four times. This indicates that it is impossible to determine to any degree of accuracy which infant the tracheal catheter theoretically might benefit. On the term infant the tracheal catheter does not seem to influence the mortality rate, but its use in the premature infant is associated with an increase of over 100 per cent in the mortality rate. See the following Table.

It is hoped that the use of the tracheal catheter in the resuscitation of the premature infant be abandoned.

The next table shows the time required

EXPANSION OF GASES TO REMOVE PULMONARY FLUIDS AND SECRETIONS

INFANTS Resuscitated		Fluids Expelled				No Fluids Expelled			
		Living		Dead		Living		Dead	
499 to 2500 grams									
125	(51 per cent)	30	(79 per cent)	8	(21 per cent)	51	(59 per cent)	36	(41 per cent)
			Total 38		(30 per cent)			Total 87	(70 per cent)
2500 grams and over									
121	(49 per cent)	14	(94 per cent)	1	(6 per cent)	100	(95 per cent)	6	(5 per cent)
Total 246			Total 15		(12 per cent)			Total 106	(88 per cent)

by 100 asphyxiated newborn infants oxygenated in the Air Lock.

USE AND NON-USE OF THE TRACHEAL CATHETER FOR OXYGENATION AND REMOVAL OF PULMONARY FLUIDS IN PREMATURE INFANTS

Weights	Tracheal Catheter Used In Resuscitation	
	Living	Dead
1500 to 2500 grams	4	3
Percent	57 per cent	43 per cent
Weights	Non-Use of Tracheal Catheter In Resuscitation	
	Living	Dead
1500 to 2500 grams	24	6
Percent	80 per cent	20 per cent

The majority of term infants remained in the Air Lock for one to two hours. The majority of premature infants remained in the Air Lock for longer periods.

Of what practical value has the Air Lock been to the Hospital? The following table shows the neonatal death rates of the term infant and the premature infant for the year immediately preceeding the use of the Air Lock, and for the third year of its installation in the St. Joseph's Maternity Hospital in Houston.[12]

The mortality rate of the term infant delivered in this hospital during 1952, the third year the Air Lock was in use, fell from 63 per 10,000 in 1949, to 37 per 10,000 in 1952, a reduction of 41 per cent. This represents a salvaging of 26 term infants in every 10,000 deliveries of term infants.

The mortality rate of the premature infant delivered in this hospital during the year 1952, the third year the Air Lock was in use, fell from 2228 per 10,000 to 1504 per 10,000, a reduction of 32.5 per cent. This represents a salvaging of 724 premature infants in every 10,000 deliveries of premature infants.

The next table shows in detail the salvage of the premature infant.

It is interesting to note that the small premature infant weighing up to 1001 grams has been but little helped by the Air Lock, while the larger premature infant weighing 1001 to 2500 grams, the mortality rate has been reduced considerably.

SUMMARY

1. A final report is made on the use of the Air Lock in the oxygenation of the asphyxiated newborn infant for starting and maintaining his respirations.

2. The initial absorption of oxygen through the skin and upper respiratory tract is most important. Increasing the pressure of oxygen available for this method of absorption is a vital step in resuscitation through oxygenation.

3. The expansion of gases expels fluids and secretions from the respiratory tract. This is the only theoretical way in which fluids can be efficiently expelled from the terminal bronchioles and alveolar sacs.

4. The use of the tracheal catheter in the newborn premature infant carries a high rate of mortality and its use should be dis-

TIME REQUIRED BY INFANTS IN AIR LOCK

Weights at birth in grams	Time in Hours											
	1		2		4		8		12		24		48		Above	
	L.	D.	L.	D.	L.	D.	L.	D.	L.	D.	L.	D.	L.	D.	L.	D.
400 to 2500 gms	2	2	5	4	5	4	4	1	0	2	6	6	4	0	5	0
2500 gms and above	15	1	15	0	7	0	6	0	4	1	0	1	0	0	0	0

Note: L. indicates living
D. indicates dead

NEONATAL DEATH RATE

(First 48 Hours of Life)

St. John's Maternity Hospital, Houston, Texas

Date	Infants Delivered		Term (2500 grams and over) Deaths	Premature (Less than 2500 grams) Deaths
January 1, 1949	Prematures	377		
to	Term	5918	39	84
January 1, 1950	Total	6295	(63 per 10,000)	(2228 per 10,000)
January 1, 1952	Prematures	452	21	68
to	Term	5702	(37 per 10,000)	(1504 per 10,000)
January 1, 1953 Salvage	Total	6154	(26 per 10,000)	(724 per 10,000)

NEONATAL DEATH RATE
(FIRST 48 HOURS OF LIFE)
Infants weighing under 2500 grams

Date	Grams 450 to 1000 (Living)	(Dead)	1001 to 1500 (Living)	(Dead)
Jan. 1, 1949 to Jan. 1, 1950	3 (8 per cent)	36 (92 per cent)	19 (46 per cent)	22 (54 per cent)
	10 per cent		11 per cent	
Jan. 1, 1951 to Sept. 1, 1951	2 (8 per cent)	24 (92 per cent)	12 (46 per cent)	14 (54 per cent)
	10 per cent		10 per cent	
	1501 to 2000 (Living)	(Dead)	2000 to 2500 (Living)	(Dead)
Jan. 1, 1949 to Jan. 1, 1950	31 (76 per cent)	10 (24 per cent)	240 (94 per cent)	16 (6 per cent)
	11 per cent		68 per cent	
Jan. 1, 1951 to Sept. 1, 1951	19 (100 per cent)	0	178 (98 per cent)	4 (2 per cent)
	8 per cent		72 per cent	

continued.

5. The mortality rate in a large maternity hospital in Houston, three years from the date of the original installation of the Air Lock in the delivery rooms and premature nursery, has fallen for the term infant from 63 per 10,000 in 1949, to 37 per 10,000 in 1952, which represents a salvage of 26 term infants. The mortality rate of the premature infant during the first 48 hours of extrauterine life in the same period in this hospital has fallen from 2,228 per 10,000 to 1,504 per 10,000, a salvage of 724 premature infants per 10,000 premature infant deliveries.

BIBLIOGRAPHY

1. Bloxsom, Allan: Resuscitation of The Newborn Infant, The Journal of Pediatrics 37:311-319 (Sept.) 1950.
2. Best, Charles Herbert, and Taylor, Normal Burke: The Psychological Basis of Medical Practice., Ed. 5, Baltimore, 1950, Williams and Wilkins Company, p. 358.
3. Eastman, Nicholson, J., Foetal Blood Studies, III. The Chemical Nature of Asphyxia Neonatorum and Its Bearing on Certain Practical Problems, Bulletin of The Johns Hopkins Hospital 50:39, 1932.
4. Eastman, N. J., Foetal Blood Studies. 1. The Oxygen Relationships of Umbilical Cord at Birth, Bulletin of The Johns Hopkins Hospital 47:221 (1930).
5. Bloxsom, Allan: The Difficulty in Beginning Respiration Seen in Infants Delievered by Cesarean Section, The Journal of Pediatrics 20:215-222 1942.
6. Ahlfeld, F., Monatschr. Geburtsch, Gynak., 21:143, (1905).
7. Bloxsom, Allan: Infants Delivered by Cesarean Section, a Re-Evaluation After Ten Years of Some Problems Found in Infants Delivered by Cesarean Section, AM. J. OB—Gyn.
8. Crehan, Elmer L., Kennedy, Roger L., and Wood, Earl H.,Study of Oxygen Saturation of Arterial Blood of Normal Newborn Infants by Means of a Modified Photoelectric Oximeter, Amer. Journ. Dis. of Child. 80:511, 1950.
9. Personal communication from Dr. Edmond Doak in regard to original investigations made by Dr. Goldschmidt and Dr. Behnke of the Navy.
10. Potter, Edith L., and Adair, Fred L.: Fetal and Neonatal Death ed 2, Chicago, 1948, The University of Chicago Press, p. 18.
11. Bloxsom, Allan: Asphyxia Neonatorum (New Method of Resuscitation), J.A.M.A. 146:1120-1124 (July 21,) 1951.
12. Bloxsom, Allen, and Mary Angelique, Sister: Neonatal Infant Mortality (Before and After the Use of the Air Lock for Processing Newborn Infants in a Large Maternity Hospital) In Publication American Journal of Obstetrics and Gynecology.

Meet Our Contributors

B. C. Chatham, M.D., Chickasha, wrote "The Management of Eclampsia" in this isue of the Journal. Doctor Chatham was graduated from Vanderbilt University and also attended Centre College, Danville, Kentucky. He served his internship and residency at Vanderbilt.

Paul M. Obert, M.D., Oklahoma City, is the author of "Hyaline Membrane Disease." Doctor Obert, who is in the department of pathology at the University of Oklahoma School of Medicine, attended Stanford University, and was graduated from the University of Oklahoma in 1947. He served his internship at St. Anthony Hospital.

Allan Bloxsom, M.D., Houston, guest speaker at the 1953 annual meeting, wrote "Resuscitation of the Newborn Infant through Oxygenation." Doctor Bloxsom's biographical information appears in the July issue as he had another article published at that time.

William T. Newsom, M.D. and *Emil F. Stratton, M.D.*, both of the University of Oklahoma Staff, Oklahoma City, are joint authors of "Causes of Death in Premature Infants" in this Journal. Doctor Newsom was graduated from Tulane University and Doctor Stratton was graduated from the University of Tennessee.

Howard B. Shorbe, M.D. and *William L. Waldrop, M.D.*, both of Oklahoma City, are joint authors of "Rigid Wire Fixation of Fractures in the Hand". *Doctor Shorbe* was graduated from Northwestern University School of Medicine in 1934 and has been certified by the American Board of Orthopedic Surgery and is a Fellow of the American College of Surgery and a member of the American Academy of Orthopedic Surgery. A veteran of 61 months service during World War II, he was a lt. col. at the time he was released.

Doctor Waldrop, who has also been certified by the Board of Orthopedic Surgery, received his medical education from the University of Oklahoma School of Medicine and graduated in 1942. He served residencies at Kernan General Hospital, Baltimore, Maryland; Bone and Joint Hospital, Oklahoma City; and Battey General Hospital, Rome, Georgia. He was recently released from service and also served several years during World War II as a captain.

THE MANAGEMENT OF ECLAMPSIA

B. C. CHATHAM, M.D.
CHICKASHA, OKLAHOM

An experience with a rapidly degenerating eclamptic patient during the last year sent the essayist looking for help in the literature. The second edition of Dieckman — *Toxemias of Pregnancy* was found to be of great value, but rather hard to separate the practical material from the theoretical. Other articles, listed at the conclusion of this paper, were of additional value, but nowhere could be found a concise article outlining safe, dependable measures which could be use no matter where one practiced medicine. The purpose of this paper is to bring together pertinent thoughts and methods of management which any physician, regardless of training, can use in the management of an eclamptic patient.

Eclampsia is a disease peculiar only to pregnancy and is characterized by edema, proteinuria, hypertension, convulsions and/or coma. Only rarely does the condition arise prior to the thirtieth week of gestation, but it is frequently seen as a complication of labor and the early puerperium.

The earliest writings in medicine mention convulsions and coma as a serious complication of pregnancy, but the word eclampsia came only around 1619 from the writings of Varandaeus. Many theories as to its etiology have been promulgated, but to date no ample explanation has been found that will explain the pathological picture known as eclampsia.

During the present era of medicine eclampsia has assumed major proportions as a cause of maternal deaths and fetal deaths because of the manner in which sepsis has been controlled and the availability of whole blood replacement for hemorrhage associated with pregnancy. For the years 1946-1948, in the United States of America, 3,800 women died because of pregnancy or its complications. Of this number 1,940 died because of eclampsia. In other words, during this period of time more than half of the maternal deaths in the U. S. A. were due to eclampsia.

During the past 50 years when so many gains have been made in various fields of medicine, very little new has been added insofar as the management of the eclamptic is concerned. The most important fact learned during this half century has been that *eclampsia can be prevented in practically, if not, every case by the use of vigorous prenatal care.* To date this type of prenatal care is not available or is not sought after by many parturients. It thus behooves every physician accepting patients for delivery to be able to manage an eclamptic.

Two schools of thought exist on this subject: (a) the radical and (b) the conservative.

The radical school has taught that emptying the uterus as soon after the onset of convulsions and/or coma was the most important factor. This method of management is mentioned only to condemn it, for if this radical school be correct then what is to be for the patient who has convulsions after delivery?

The conservative teaching has been that the eclampsia should be treated and controlled before the termination of pregnancy is considered. In other words, the treatment is directed to the oliguria and anuria, the cerebral anemia and edema, and the arteriolar spasm until the patient can be delivered normally. Thus, only a rare case will have the uterus emptied surgically, and then only for obstetrical reasons rather than the eclampsia per se. Simply said, *the conservative treatment of eclampsia consists of rest*

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and sedation with vigorous attempts to produce water elimination.

The outline to follow is quite conservative and depends to a large extent upon:

(1) Constant observation of the patient by medical personnel;
(2) Modifying the treatment to meet the needs of each individual.

THE MANAGEMENT OF THE CONVULSIVE STAGE

The care of the undelivered eclamptic is most difficult because of the pregnancy and the necessity of delivery at the opportune time. The principles of care, however, apply to eclampsia at any stage of gestation.

(1) The patient is put to bed in a dark, quiet room and *all* examinations deferred until the convulsions are controlled. Frequently the most insignificant noise or manipulation will precipitate another seizure.

During the seizures the patient is protected from self-inflicted injuries by the use of bed rails and a mouth gag, but forceful restraints are never to be used. All false teeth, rings, and jewelry should be removed at once.

The position in bed is important. Pillows are not used, but the head of the bed is elevated unless severe pulmonary edema demands postural drainage. Once an hour the entire position of the body is shifted. Suction apparatus with an attached catheter is used to aspirate the vomitus, mucous, blood, or pulmonary edema. Pure oxygen is administered by nasal catheter. If reasonable doubt exists about an adequate airway, then a tracheotomy is done.

A blood pressure cuff is kept continuously on the arm, and hourly readings taken until the convulsions and coma are controlled. A retention catheter is inserted into the bladder and hourly volume determinations are made. Frequent observations are made of the catheter to make sure that it does not become plugged. As soon as controlled, the patient's perineum is shaved.

Blood is typed, rh'd and cross matched as soon as possible so as to be available to meet any needs that may arise.

The gravity of the situation must be explained to the patient's family and no visiting permitted. Nothing is more disturbing than a roomful of well-meaning, chattering visitors.

(2) MEDICATION:

Sodium Amyal in 1 gram (15 grains) doses is given intravenously until convulsions are controlled. Thereafter, sodium phenobarbital is given intramuscularly in 0.3 gram (5 grain) doses every three to five hours to control the patient.

As soon as possible 10 cc of 50 per cent solution of magnesium sulfate is given in each gluteal region and then 10 cc is given every four hours for the first 24 hours. The knee reflexes are tested before each injection of magnesium sulfate, and if absent the medication is not given. Approximately 8 to 10 grams of magnesium sulfate are necessary for a therapeutic effect. Respiratory failure from magnesium sulfate intoxication occurs only after the disappearance of the tendon reflexes. Calcium is the antidote for overdosage of magnesium sulfate, and solutions of the salt should be available.

The use of penicillin during the acute eclamptic phase is helpful in controlling infection in the respiratory system and reproductive tract. Some sulfanomide or streptomycin should be used to control the urinary tract infection which always follows the use of an indwelling catheter.

Parenteral vitamin mixtures are given with parenteral feedings until the patient is able to take them by mouth.

Blood counts are done early and anemia is corrected by giving transfusions of type and rh specific blood. Repeated hematocrit determinations are useful in determing how well hemoconcentration and dehydration are being combated. The use of concentrated solutions of serum albumin are quite helpful in mobilizing the edema fluid and promoting diuresis.

It will be noted that morphine has not been mentioned. This is intentional because it is felt that the combination with barbiturates frequently causes such depression as to seriously complicate the therapy and management of tht eclamptic. *Oversedation can not be withdrawn, but under sedation can be corrected.*

Also, it will be observed that sedatives are used in small doses, and at frequent intervals, and that the list is limited to sodium amytal, sodium phenobarbital, and magnesium sulfate. One works better with a few familiar tools. Sedatives are used only to terminate convulsions, prevent their recurrence, and control irritability. In the comatose patient care should be exercised to watch for drug idiosyncrasy.

VERIFICATION OF DIAGNOSIS:

Once the seizures are controlled, the diagnosis of eclampsia should be verified. The finding of hypertension, edema, and proteinuria along with the convulsive seizures is sufficient verification.

MEASURES TO PROMOTE HEMODILUTION AND DIURESIS:

Once the patient is relatively calm, an intravenous infusion of 500 cc of 20 per cent glucose in water is given over a period of 50-60 minutes. If there is evidence of dehydration, in spite of edema, another 500 cc of 5 per cent glucose in water should follow the initial infusion. During this time constant observation for pulmonary edema is made.

Thereafter, infusions are given in an attempt to maintain an output of 25-30 cc of urine per hour. If the patient is anuric in spite of this, then the daily fluid infusion is limited to 1500-1800 cc of 5 per cent glucose in water. If and when urine is put out, then the urine volume is added to the calculated insensible fluid loss (about 1500 cc — depending upon the season and climate), to make up the daily fluids to be administered.

SPECIAL MEASURES

In the presence of any evidence of cardiac failure the patient should be digitalized as soon as possible and maintained in a digitalized state until delivered and convalescence is smooth.

In anuric patients the use of 0.5 gram doses of procaine intravenously in 50-100 cc of 5 per cent glucose are given every four to six hours to help promote diuresis.

SPECIAL OBSERVATIONS OF PROGNOSTIC VALUE:

a. The earliest sign of impending disaster is an insidious, unexplained, and progressive fall in arterial pressure.

b. The most reliable sign of improvement is diuresis, and *until diuresis occurs, improvement has rarely taken place.*

c. The onset of any one of the following is considered serious and leads to a very guarded and grave prognosis:

1. Paroxysmal dyspnea
2. Pulmonary edema
3. Circulatory collapse and shock
4. Heart failure
5. Premature separation of the placenta
6. Cerebrovascular accidents.

THE MANAGEMENT OF THE POST CONVULSIVE STAGE

If and when the stage is controlled the patient passes into a comatose state which will gradually fade into a stuporous to lethargic state. Sedation in the form of soluble phenobarbital should be given parenterally to prevent hyperirritability and the recurrence of seizures during this period.

The use of oxygen should be continued, and aspiration of the pharynx as needed. Both urine volumes and blood pressure readings should be maintained at one to four hour intervals, depending upon the condition of the patient. The position of the patient is changed frequently. As soon as possible, a cleansing enema is given. Once the patient's condition is well-stabilized, a thorough obstetric examination and evaluation is made.

During this phase, fluid and caloric intake is maintained by parenteral glucose. As soon as possible oral feedings of high caloric liquids are begun. Magnesium sulfate is used parenterally as indicated by urinary output, cerebral irritability, and stabilization of blood pressure readings.

At this time a copious diuresis should begin, and is a most welcome prognostic sign. It should be maintained by forcing large amounts of fluids to the patient—that is the parenteral and oral intake may go as high as four to six litres daily. *At no time is the patient to be given sodium chloride or sodium bicarbonate in any form or fashion.*

THE MANAGEMENT OF THE POST PARTUM ECLAMPTIC:

Frequently—about 10 per cent—eclampsia occurs following delivery. *This fact alone should be ample evidence that Caesarean Section is not a treatment for eclampsia.*

The medical management of the post partum eclamptic should be the same as that for the ante—or intrapartum eclamptic because the disease is the same.

TERMINATION OF PREGNANCY:

Once an eclamptic is controlled as evidenced by copious diuresis for one to two days along with a stable blood pressure during this time, plus clearing of the sensorium a decision should be made concerning emptying of the uterus.

If the patient is at or near term the cervix will usually be found ripe—i. e. soft, effaced and partially dilated. The membranes should then be ruptured, which in most cases will

initiate labor. This failing, then Pitocin[R] in small doses (never more than two minims) should be given at 30 minute intervals (or a controlled intravenous infusion of Pitocin[R] in glucose) until regular contractions are occurring at five minute intervals.

During labor, sedatives and analgesics are given in liberal amounts so as to prevent a recurrence of the eclamptic state. Frequent urine volume and blood pressure determinations are important. When in doubt, oxygen should be used to prevent fetal and maternal anoxemia.

Whenever the fetus is viable every effort should be made to protect it from excessive sedation as well as traumatic delivery. This assumes more importance when it is realized that many eclamptics deliver prematurely.

Delivery should be accomplished under local block anesthesia because the controlled eclamptic tolerates poorly both general and spinal anesthesia. Prolonged and difficult operative procedures are to be avoided if at all possible. Delivery should, however, be facilitated by low outlet forcep delivery with episiotomy when indicated.

An occasional controlled eclamptic will be found to have a long, rigid, undilated cervix which defies induction of labor. If the fetus is viable, delivery should be accomplished by Caesarean section under local block anesthesia. General or spinal anesthesia is definitely contraindicated except in the hands of an expert anesthesiologist. Vigorous care and management is quite necessary following operative delivery to prevent the recurrence of convulsions. Many eclamptics have had their fate sealed by the injudicious use of section for delivery.

GENERAL CONSIDERATIONS:

The occurrence of eclampsia with control at 32-36 weeks gestation adds the problem of fetal viability. Should the patient be well controlled, careful waiting can be instituted to allow for fetal maturity. This period is always fraught with the danger of recurrence of eclampsia and the period should never be longer than four weeks from the onset of the eclamptic state. Permanent cardiovascular damage may frequently occur after four weeks of severe preeclampsia or eclampsia.

After delivery ten to fourteen days of observation are necessary before dismissal from the hospital. All patients should be convinced of the necessity of frequent checks in the future. Further childbearing is best postponed two to three years. In the older eclamptic, consideration should be given to prevention of future pregnancies by some form of sterilization.

SUMMARY

(1) No claims of originality are made, but rather an attempt is made to bring together some pertinent ideas from several sources.

(2) No series of cases is presented, and no special claims are made.

(3) The ultra conservative management of eclampsia is heartily endorsed. One such method of management is outlined.

(4) Caution is advised concerning the use of highly technical means of eclampsia management.

(5) In the management of eclampsia there is no substitute for constant personal care and observation along with individualization of treatment.

BIBLIOGRAPHY

1. American Journal Obs.-Gyn., Vol. 49, No. 1, pp. 49-75, January, 1945.
2. The Toxemias of Pregnancy, Dieckman, C. V. Mosby Co., 1952.
3. Preeclamptic and Eclamptic Toxemia of Pregnancy, Dexter and Weiss, Williams and Wilkins Co., 1941.
4. Clinical Obstetrics, Lull and Kimbraugh. Lippincott, 1953.
5. Medical Clinics of N. A., Vol. 35, No. 3 pp. 677-699.
6. N. C. Medical Journal, Vol. 10, No. 12, pp. 630-634.
7. Pennsylvania Medical Journal, Vol. 52, No. 7, pp. 1053-1059.
8. Obs.-Gyn. Survey, Vol. 3, No. 6, pp. 769-778.
9. Obstetrics, Eastman-Appleton-Century-Crofts, 1950.
10. Obstetrics, Greenhill—W. B. Saunders, 1951.
11. Management of Obstetrical Difficulties, Titus. C. V. Mosby Co., 1950.
12. Gynecology and Obstetrics, Davis. W. F. Prior Co.

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CAUSES OF DEATH IN PREMATURE INFANTS

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The causes of death in premature infants deserve major interest because of the high mortality. Reports of the Oklahoma State Health Department have been analyzed to point out major causes of death in the pediatric age group. There were approximately 2000 deaths from the seven leading causes for death in the age group one through 15 in Oklahoma in the five year period 1945 through 1949. For comparison, as shown in Table 1, in a projected five year period, there would be at least 3000 deaths in premature infants (based on an average of 50,000 live births annually in Oklahoma, with a six per cent incidence of prematurity, and a minimum mortality rate of 20 per cent in these infants[1]).

TABLE 1

Ages 1-15 years (1945-1949)		
Fatal injuries		1124
Pneumonia	333	
Poliomyelitis	130	
Congenital defects	122	882
Cancer	114	
Tuberculosis	111	
Heart disease	72	
Total (1-15 years)		2006
Deaths associated with prematurity	.....	3000

LEADING CAUSES FOR DEATHS IN INFANTS AND CHILDREN IN OKLAHOMA IN A FIVE YEAR PERIOD.[1]

Until effective application of the technics for preventing prematurity can be accomplished, a major objective should be to prevent, treat, or modify the conditions responsible for deaths in premature infants. To carry out this objective, it is essential that we understand the various causes for death in prematures and not be satisfied with the cursory diagnosis of "too small to live".

It has been common in the past to classify any infant weighing less than 1000 grams (two pounds, three ounces) as "previable." However, an increasing number of infants weighing less than 1000 grams at birth are being reported as surviving. One infant weighing only 397 grams (14 ounces) on the second day of life is reported to have survived and to have weighed at one year 13 pounds and 12 ounces.[2] Maturity of various organ systems does not correlate absolutely with birth weight; therefore it is impossible to decide with certainty during the life of any particular infant that this one is "too small to live". We must have faith in the tremendous growth capacities of prematures and give them the proper care to encourage their survival.

With careful postmortem examination a satisfactory cause for death can be found in almost all premature infants that die. In the largest series of autopsied prematures yet reported the cause for death in almost half of the cases is described as "abnormal pulmonary ventilation". Almost all of these presented some degree of what we now call hyaline membrane disease. The results of this study by Bundensen, Potter, et al is shown in Table 2.[3]

TABLE 2

Abnormal pulmonary ventilation	47.4 per cent
Injury at birth	16.1 per cent
Malformations	13.5 per cent
Infections	13.2 per cent
Miscellaneous	9.8 per cent

CAUSES FOR DEATH IN 3,709 AUTOPSIED PREMATURES, 1000-2500 GRAMS.
(Adapted from Bundensen, et al[3])

RESULTS

An analysis of causes for death in premature infants at University and Crippled Children's Hospitals during the years 1951 and 1952 has been made. Any newborn with at least a heart beat and weighing five and a half pounds or less is considered a live born premature. Sixty-six prematures who had autopsies are reported here, some were born at University Hospital and some were admitted from neighboring counties. The results are shown in Table 3.

*Presented before the General Session at the Annual Meeting of the Oklahoma State Medical Association April 13, 1953.

Hyaline membrane disease	22
Intracranial hemorrhage	20
Malformations	7
Infection	7
Miscellaneous	8
Prematurity	2
Total	66

TABLE 3

CAUSES FOR DEATH IN PREMATURES, UNIVERSITY AND CRIPPLED CHILDREN'S HOSPITAL, 1951-1952.

DISCUSSION

Our findings are in agreement with an earlier report of Russell[4] in that the majority of deaths in prematures occur within the first 24-48 hours of life. In prematures delivered at University Hospital we have found no deaths due to inadequacies of our standard resuscitation technics.

The ultimate decision as to cause for death rests with the pathologists, however, in the absence of satisfactory postmortem examination, the clinical course of infants having early deaths can be highly reliable in assigning a probable cause for death.

The clinical picture of an infant with pulmonary hyaline membrane disease is very characteristic. The infant usually appears normal at birth. However, within one or more hours he becomes progressively cyanotic, having rapid respirations and marked retraction of the soft tissues around the thorax. Fine rales may be heard over the entire lung field. Despite a tremendous respiratory activity, the cyanosis proceeds until terminally apnea and death occur on an anoxic basis. The duration of life in 19 cases studied was two to 48 hours, with an average of 19 hours. Some infants may recover from non-fatal degrees of this disease. High humidity in the incubator may improve some cases. A completely satisfactory method of preventing or treating this disease is yet to be learned.

The diagnosis of intracranial hemorrhage comprises two major categories, namely, traumatic birth injury and anoxic hemorrhages associated primarily with obstetric complications such as abruptio placenta or prolasped cord. Exact distinction between these types, even with careful postmortem examination, is extremely difficult and often impossible. The characteristic clinical course of an infant with intracranial hemorrhage is strikingly different from one with hyaline membrane disease in that he has a normal color as long as his respiratory activity is adequate. Apnea or other severe limitations of respiratory activity due to pathology of the respiratory center will lead to cyanosis despite the presence of an adequate pulmonary system. The infant may have only one episode of apnea, that being terminal, or he may have several from which he can be stimulated to again breathe normally for unpredictable periods of time. The duration of life in 16 autopsied cases in this series was from one-half to 53 hours, an average of 17 hours. There can be no doubt that many surviving children with mental or neuromuscular imperfections have had intracranial hemorrhages in the newborn period as their basic pathology. There is now no known effective therapy for intracranial hemorrhage; prevention is our only hope.

Deaths from congenital anomalies other than gross malformation may be detected only by careful postmortem study. Fatal anomalies of the cardiovascular and central nervous systems are not at all uncommon in prematures.

With improved nursery technics, modern chemotherapy, and early diagnosis, deaths from infections have become much less common than they were 15 to 20 years ago. Our criteria for suspecting an early infection in a premature are anorexia, weight loss, vomiting or diarrhea, and a subnormal temperature. An experienced nurse's comment that the baby "just doesn't act right" must be given careful attention. With early diagnosis and treatment our experience has been to observe marked recovery potentialities in prematures with early infections.

CONCLUSION

1. Hyaline membrane disease and intracranial hemorrhage combined account for two thirds of the deaths in prematures. There is an urgent need for effective methods of prevention, and treatment or modification of these two leading causes of death.

2. It is felt that through better understanding and reporting of the causes of death in premature infants specific efforts can be directed so as to reduce these major causes of death in the first 15 years of life.

The authors wish to express their appreciation to Doctors Hopps and Obert and Miss Jeane Greene of the Department of Medicine and Pathology of the University of Oklahoma School of Medicine for their assistance in making this study.

BIBLIOGRAPHY

1. Annual statistical reports of the Oklahoma State Department of Health.

2. Monro, J. S.: A Premature Infant Weighing Less than One Pound at Birth Who Survived and Developed Normally. Canad. M. A. J. 40:69-70,Jan. 1939.

3. Bundensen, Herman N.; Potter, Edith L.; Fishbein, William I.; Bauer, Frank C.; and Plotyke, Gertrude V.: Progress in the Prevention of Needless Neonatal Deaths, Reprint from the Annual Report of the Chicago Health Department, 1951, abstracted in J.A.M.A. 148:907, March, 1952.

4. Russell, G. R., and Betts, W. A.: Natal and Neonatal Factors in Premature Infant Mortality, J. Ped. 40:722, 1952.

HYALINE MEMBRANE DISEASE PATHOLOGY, ETIOLOGY and PATHOGENESIS

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Annually in Oklahoma an estimated 400 infants die within the first 48 hours of life with a hyaline membrane lining in their lungs. The entity resulting from this pathologic change is most commonly termed "pulmonary hyaline membrane disease of the newborn", and is the cause of death in most of these infants.

Half a century has elasped since Hochheim first reported, in a series of 43 autopsies on newborn infants, the existence of a peculiar membrane in the lungs of two of these. Since then numerous papers have been presented on this subject. In only the past few years has there been general awareness of this disease and, until recently, little attention has been given to this entity as a primary cause of death. It is now generally accepted that one of the most common causes of death in the newborn is hyaline membrane disease. Many terms have been applied to this condition, most of these reflecting the presumed etiology. Some of the more common terms that have been applied are: asphyxial membrane, aspiration pneumonia, vernix membrane, fibrinoid exudate, and eosinophilic membrane.

Pulmonary hyaline membranes of the newborn have been described in premature babies as little as 500 gm., and in full term babies. However, the incidence is highest in premature infants with a birth weight between 1000 and 2000 gm. This group of infants accounts for approximately 50 per cent of the cases of hyaline membrane disease. Approximately 50 per cent of the deaths in the group with a birth weight between 1000 and 2000 gm. are found at autopsy to present pulmonary hyaline membranes. Approximately 85 per cent of deaths from hyaline membrane disease occur within 48 hours after birth. Miller, et al, have described hyaline material lying in the lumina of air passages of stillborn prematures, but typical pulmonary hyaline membrane has never been described in infants dying within the first hour of life. After the sixth day of life pulmonary membranes are seldom present, although infants up to 14 days postpartum have been described with this change. It is encountered with the same frequency in both sexes and in all races. Blystad, Landing, and Smith noted that histories of babies, who were found at autopsy to have pulmonary hyaline membranes, revealed a relatively greater frequency of cesarean section, fetal distress, and placenta praevia, when compared with those who did not show membranes. Babies delivered of diabetic mothers, by section, showed a slight increase in incidence of hyaline membranes. The only definite predisposing cause known is prematurity. The reason premature infants most commonly manifest this change has not as yet been explained.

Gross autopsy findings are not diagnostic, although there are characteristic changes. Lungs show diffuse atelectasis and though the infants may have lived for several hours or days, many lungs are completely non-air-containing, and sink rapidly when placed in water. Lungs of infants may show similar gross changes, however, from tracheal or bronchial obstruction by mucus or other foreign debris. Death is typically that of asphyxiation. Throughout the body there are multiple, discrete, petechial hemorrhages, especially over mucous membranes and serous surfaces. There may be areas of hemorrhage in the medulla producing death indirectly by involving the vital centers. Occasionally there is massive pulmonary hemorrhage. This may be an important contributing cause of death.

Histologicaly the lungs show marked atelectasis with hyaline material lining the air passages. The material is homogeneous and stains red to bluish-red with hematoxylin and eosin. Typically this material is plastered against the walls. Infrequently it lies free within the lumina of the small respiratory bronchioles, alveolar ducts, and occasionally within the alveoli. Usually degenerated squamous epithelial cells, derived from aspirated amniotic fluid, are seen lying

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within the hyaline membrane and often these are seen between the surface of the air passage and the membrane. At first glance it appears that the amount of hyaline material is not sufficient to produce marked extensive atelectasis. On more careful examination, and with the aid of elastic fiber stains to outline the air passages, it has been shown that the hyaline material predominantly lines the small respiratory bronchioles and alveolar ducts. Very few alveoli contain the material. By obstructing the flow of air from the small air passages to the alveoli, large segments of lung become atelectatic from the presence of relatively small amounts of hyaline membrane. Multiple histologic sections from all lobes of both lungs have shown the membrane to be widespread and evenly distributed. Hemorrhage and acute inflammatory cell infiltration is sometimes associated with the hyaline membrane, however many lungs show neither of these changes, indicating they are not necessarily a part of the microscopic picture. The liver and heart frequently show fatty change and parenchymatous degeneration. These pathological changes are secondary to marked hypoxia, which is a constant clinical manifestation.

The term hyaline membrane is purely desriptive. It cannot be assumed that all hyaline membranes are identical, in spite of their morphologic similarity. The nature of the membranes covering the surface of the respiratory passages has not been definitely established. To date, histochemical studies have shown all membranes to be of essentially the same chemical composition. Membranes are composed primarily of proteins, lipids, and polysaccharides. Stains for fibrin, mucus, and amyloid are negative and numerous other types of stains have shown no characteristic feature.

Pulmonary hyaline membranes are not peculiar to lungs of newborn infants. Numerous pathologists have described an eosinophilic coating of the inner surfaces of alveoli, respiratory bronchioles, and alveolar ducts in older children and adults dying of a variety of diseases. A hyaline-like membrane lining the air spaces was first described in plague by Strong, Crowell and Teague. Since that time there have been numerous reports of hyaline-like membranes in a wide variety of inflammatory diseases and other conditions. The most common of these in which membranes have been described are influenza, rheumatic pneumonia, lobar pneumonia, uremia, influenzal pneumonia, and numerous war gas poisonings. To date no histochemical difference has been demonstarted in the pulmonary membranes of newborn and older individuals. All staining reactions are also similar. The major significant difference in the lungs of older individuals and the lungs of infants is the lack of atelectasis associated with the membranes in older children and adults.

The origin of pulmonary hyaline membranes in newborns is still unknown. Attempts have been made to reproduce pulmonary hyaline membranes since 1925, when these were first described in infants in this country by Johnson and Meyers. The authors were unable to produce membranes by injecting amniotic fluid into the trachea of experimental animals. They were, however, able to do so by introducing egg albumin intratracheally. Farber and Wilson produced lesions which they considered comparable to pulmonary hyaline membranes by the injection of India ink and dilute hydrochloric acid. They were also able to produce hyaline-like membranes by the intratracheal instillation of fibrinopurulent exudate. In 1949 Dick and Pund produced pseudo-hyaline-like membranes in the lungs of stillborn infants by intratracheal instillation of warm centrifuged amniotic fluid and, in addition, the lungs were submitted to alternating positive and negative pressure of 10 mm. of mercury. Miller and Hamilton were unable to produce hyaline membranes in dogs and rabbits by intratracheal injection of vernix, meconium, amniotic fluid, saline, Ringer's lactate solution, and distilled water. Blystad, Landing, and Smith were unable to produce hyaline-like membranes in live rats by the instillation of human amniotic fluid into the trachea. However, by injecting large amounts of amniotic fluid in repeated small amounts over a period of time they produced hyaline-like membranes in the excised lungs of guinea pigs and mice. These lungs were alternately expanded and contracted for one hour by air pressure of one pound.

A different approach to the experimental production of pulmonary hyaline membranes was first used by Farber. He was able to produce edema and hyaline-like membranes in the lungs of rabbits by performing bilateral cervical vagotomies. These animals died within eight to 24 hours and autopsy

showed occasional bronchopneumonia and hyaline-like membranes. This work was repeated by Miller, et al, and these workers were able to produce hyaline-like membranes in 13 of 20 rabbits. Histochemical preparations of the lungs of these rabbits were similar to the hyaline membranes in newborn babies.

A third experimental approach in the production of hyaline-like membranes in animals has been the use of oxygen. Many authors report pulmonary hyaline-like membranes in experimental animals after the animals have been exposed to oxygen for varying lengths of time. The most recent production of hyaline-like membranes by this procedure was by Bruns and Shields. Three adult and nine infant guinea pigs were placed in 98 per cent concentration of oxygen under normal atmospheric pressure conditions. The animals died from 38 to 119 hours after exposure. The adult guinea pigs showed pulmonary hyaline-like membranes. Two three day old guinea pigs were autopsied after being in oxygen 38 and 151 hours and both showed hyaline-like membranes. Of four one day old animals, only one had evidence of hyaline-like membranes. Four intrauterine fetuses in one of the adult guinea pig's uterus during the experiment did not show evidence of hyaline membrane formation.

Warren and Gates subjected dogs, guinea pigs, rats, and rabbits to x-ray irradiation and were able to demonstrate pulmonary hyaline-like membrane in some of these animals. Messen described hyaline-like membranes in the lungs of rabbits which died of carbon dioxide poisoning.

To date it is apparent that two basic methods have been employed in the attempt at experimental production of hyaline-like membranes. The first of these is intratracheal instillation of amniotic fluid and its constituents with autopsy of the animal after a period of respiration. It is believed by the authors who have attempted hyaline membrane production by this method, that protein and other constituents of hyaline membranes in newborn babies are derived from the amniotic fluid. It is thought that respiration must be established and maintained for a period of time for the absorption of the fluid portion of the amniotic fluid, leaving the solid portion plastered against the respiratory bronchioles, alveolar ducts, and alveoli. This concept is based on the fact that intrauterine aspiration of amniotic fluid by infants is often considerable.

The second basic method is the introduction of various substances into the respiratory tree which cause capillary endothelial damage, permitting the escape of blood proteins into the air spaces. This material then becomes plastered against the sides of the bronchioles, alveolar ducts and alveoli. It is believed by this group of investigators that formation of hyaline-like membranes in infants is comparable to those formed in older children and adults by various inflammatory processes.

Both of these methods of experimental production of hyaline membranes have been partialy successful in that some authors have been able to demonstrate hyaline-like membranes lining some of the air passages. The major significant difference in the histological picture in the lungs of experimental animals, and the lungs of newborn infants presenting pulmonary hyaline membranes, is the absence of atelectasis in all the animals in which the membrane has been produced. To date there is general agreement that hyaline membrane disease, as seen in newborn infants, has not been produced in experimental animals. It is obvious that many of the experimental methods of production by the introduction of foreign substances cannot be accepted because infants never come in contact with many of these. Pulmonary hyaline membranes have been seen in infants who have not breathed increased oxygen concentrations. Though oxygen may be a factor it is not likely the major one. At present it seems most probable that numerous factors enter into the formation of these membranes. Until the origin of this pathological change is ascertained, effective preventive measures or therapy will be difficult to establish.

BIBLIOGRAPHY

1. Blystad, W., Landing, B. H. and Smith, C. A. Pulmonary Hyaline Membranes in Newborn Infants. Statistical Morphologic and Experimental Study of Their Nature, Occurrence and Significance. Pediatrics. 8: 5, July 1951.

2. Bruns, Paul D., Shields, Lloyd V. The Pathogenesis and Relationship of the Hyaline-like Pulmonary Membrane to Premature Neonatal Mortality. Am. J. Ob. and Gynec. 61: 953, 1951.

3. Dick, Fred, Jr. and Pund, Edgar R. Asphyxia Neonatorum and the Vernix Membrane. Arch. of Pathol. 47: 307, April 1949.

4. Epstein, E. F. and Greenspan, E. B. Rheumatic Pneumonia. Arch. Int. Med. 68: 1074, 1941.

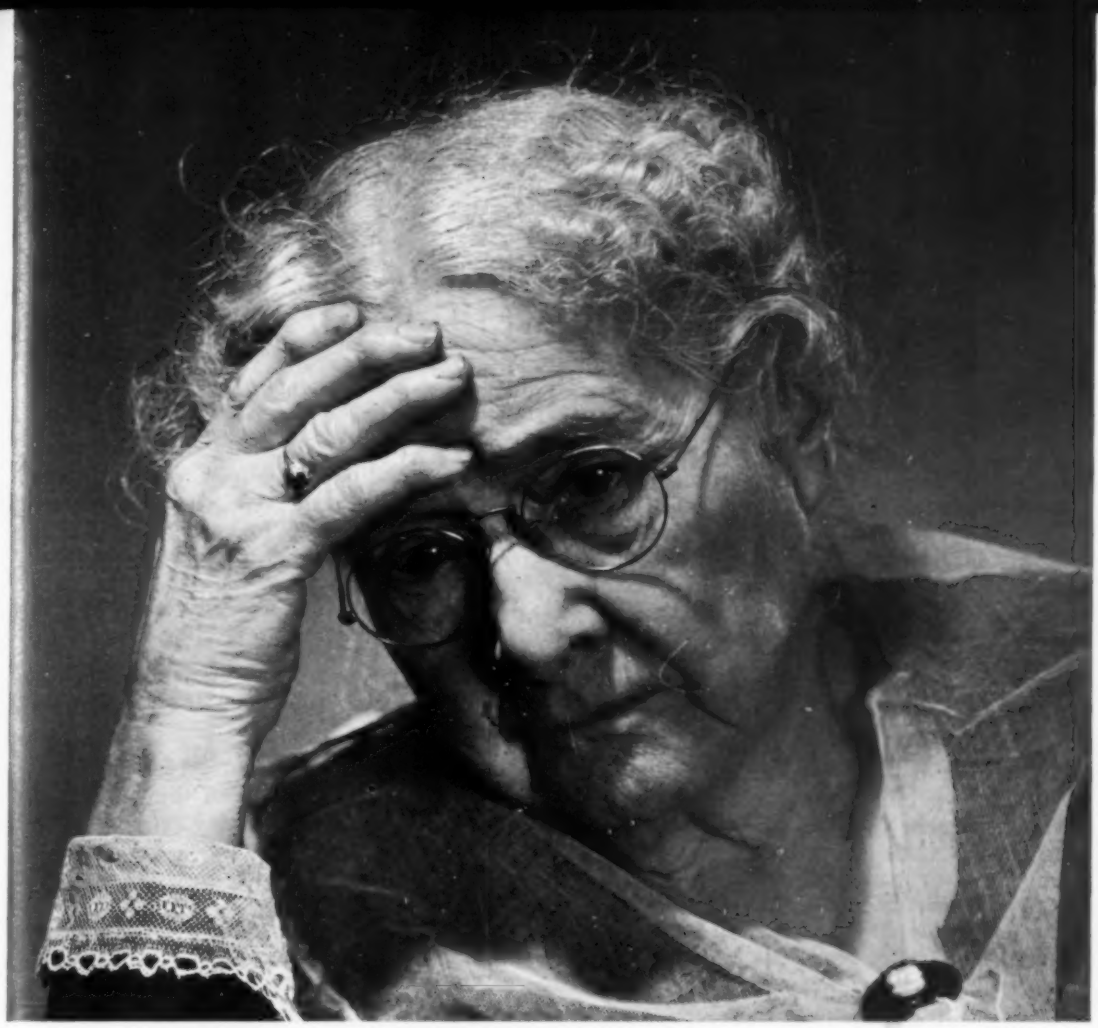
5. Farber, S. Studies on Pulmonary Edema, Consequences of Bilateral Cervical Vagotomy in Rabbit. J. Exper. Med. 66: 397, 1937.

6. Farber, S. and Wilson, J.L. The Hyaline Membrane in the Lungs: 1. Descriptive Study. 2. Experimental Study. Arch. Path. 14: 437, 1932.

7. Hoecheim, K. Herrn Geh. Medicinabrat Dr. Johannes Orth zur Feier Seines 25-Jahrigen Professoren Jubilamus Gewidmet. Berlin, 1903.

8. Johnson, W. C. and Meyer, J. R. A Study of Pneumonia in the Stillborn and Newborn. Am. J. Obst. and Gynec. 9: 151, 1925.

9. Miller, Herbert C., and Hamilton, Tom R. The Pathogenesis of the Vernix Membrane. Relation to Aspiration Pneumonia in Stillborn and Newborn Infants. Pediatrics. 3: 735, June 1949.



The inevitable restrictions of advancing years, the reduced activity and a lowered intake of bulk-producing foods all contribute to the high incidence of constipation in older persons.

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President's Page

Those who have not given real thought to the problems of rural health will be inclined to question the value of a statewide rural health conference. It is all too easy to assume that "health is health" and that the development of good health in rural areas is no different than its development in any other strata of our society or economy. While such reasoning is perhaps largely true, from the standpoint of the theorist, it has long been apparent to those who have familiarized themselves with health problems as they actually exist in rural communities, that there are many factors of the rural enviornment which exert a very profound effect upon any effort to raise the health standards of rural people.

Even in these modern times, the very nature of rural life, makes it difficult for rural people to organize effectively for meeting those health needs which can only be supplied through the combined efforts of those in the community.

In spite of the prevalent romantic belief that life on the farm is the easy road to robust health, that life is fraught with constant threats to the health and safety of the individual. The maintenance of safe and palatable supplies of water, the disposal of sewage and other wastes, the constant danger of animal borne diseases and the relative isolation of the farm family are among the problems which must be met if our rural people are to enjoy the best health which modern medical science can provide. It was this realization on the part of the Sub-Committee on Rural Health which prompted the planning of the First Oklahoma Rural Health Conference to be held in Oklahoma City September 8 and 9, 1953. The Committee, in organizing this conference, wisely secured the counsel and advice of leading rural organizations in this state and of other organizations and agencies with a legitimate interest in rural health. Through these sponsoring organizations, the program for the conference was developed and some 1,500 rural leaders have been invited to attend.

In an economy such as Oklahoma's we must all be aware that problems of agriculture are the problems of us all. Agriculture in Oklahoma can flourish best when Oklahoma's agricultural population enjoys flourishing health. We all have a stake in rural health and can best protect that stake by working together with rural people in solving their health problems as they develop.

Your attendance at the first Rural Health Conference is your best opportunity to take an active part in the development of an Oklahoma rural health program in which you can believe and in which you can work hand in hand with those willing to strive together toward a common goal.

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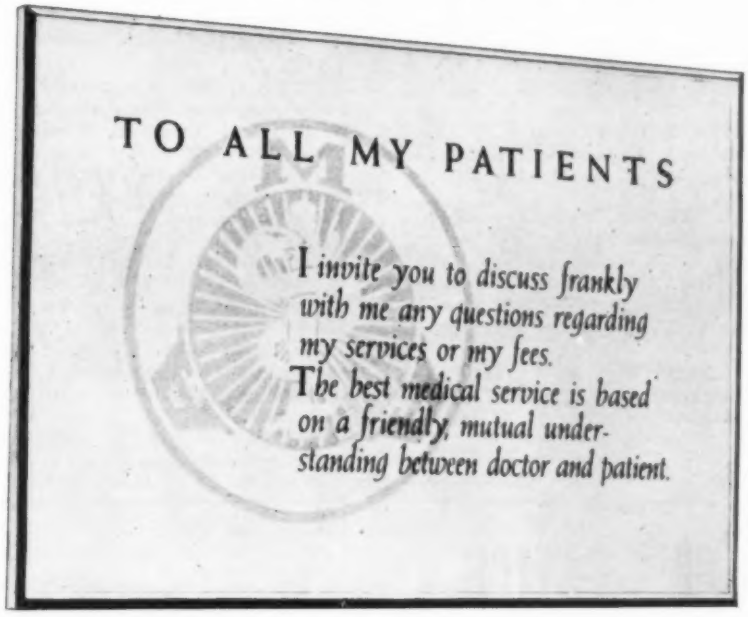
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H. DAVIS CHIPPS, M.D., *PATHOLOGY*, Director of Laboratories, Ochsner Clinic and Foundation Hospital, New Orleans, Louisiana.

EDWARD L. COMPERE, M.D., *ORTHOPEDICS*, Professor of Bone and Joint Surgery, and Chairman of Department, Northwestern University Medical School, Chicago, Illinois.

MURRAY M. COPELAND, M.D., *SURGERY*, Professor of Oncology, Georgetown University Medical Center, Washington, D.C.

CHARLES C. DENNIE, M.D., *DERMATOLOGY*, Professor of Dermatology, University of Kansas Medical School, Kansas City, Missouri.

WILLIAM S. FIELDS, M.D., *NEUROLOGY*, Professor of Neurology, Baylor University College of Medicine, Houston, Texas.

ERLE HENRIKSEN, M.D., *GYNECOLOGY*, Clinical Professor of Gynecology, University, University of Southern California Medical School, Los Angeles, California.

W. PAUL HOLBROOK, M.D., *MEDICINE*, Director of Research, Southwestern Clinic and Research Institute, Inc., Tucson, Arizona.

WILLIAM G. LEAMAN, JR., M.D., *MEDICINE*, Professor of Medicine and Chairman of Department of Medicine, Woman's Medical College of Pennsylvania, Philadelphia, Pennsylvania.

PERRY S. MacNEAL, M.D., *MEDICINE*, Associate in Medicine, Jefferson Medical College, Philadelphia, Pennsylvania.

LYMAN MASON, M.D., *OBSTETRICS*, Clinical Professor of Obstetrics and Gynecology, University of Colorado School of Medicine, Denver, Colorado.

GEORGE PINESS, M.D., *ALLERGY*, Associate Professor of Medicine, University of Southern California, Los Angeles, California.

MERRILL J. REEH, M.D., *OPHTHALMOLOGY*, Assistant Clinical Professor and Consultant in Opththalmic Pathology, Oregon Medical School, Portland, Oregon.

PETER A. ROSI, M.D., *SURGERY*, Associate Professor of Surgery, Northwestern University, Professor of Surgery, Cook County Graduate School of Medicine, Chicago, Ill.

FRANCIS F. SCHWENTKER, M.D., *PEDIATRICS*, Professor of Pediatrics, The Johns Hopkins Hospitals, Baltimore, Maryland.

HOWARD E. SNYDER, M.D., *SURGERY*, Lecturer in Surgery, University of Kansas, Lawrence, Kansas

HARRY M. SPENCE, M.D., *UROLOGY*, Clinical Professor of Urology and Chairman of Department, Southwestern Medical School of the University of Texas, Dallas, Texas.

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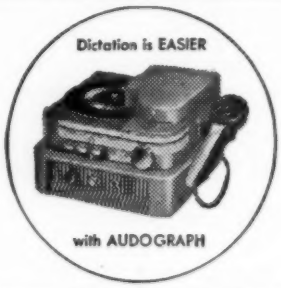

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A.C.P. REGIONAL MEETING TO BE HELD IN TULSA

The Oklahoma-Arkansas Regional Meeting of the American College of Physicians will be held in Tulsa at the Mayo Hotel September 19. Program is as follows:

MORNING SESSION

9:00 REGISTRATION

9:45 Governor's Welcome
Wann Langston, M.D., F.A.C.P., Oklahoma City

Presiding Officer
S. Charlton Shepard, M.D., F.A.C.P., Tulsa

10:00 The Use of 6-Mercaptopurine in Treatment of Leukemia
Vincel Sundgren, M.D., Associate, Tulsa

10:15 A Clinical Comparison of Anti-Cholinergic Drugs
Joe H. Hardin, M.D., Little Rock, Ark. (by invitation)

10:30 Some Aspects of Hodgkin's Disease
John W. DeVore, M.D., Oklahoma City (by invitation)

10:45 Microscopic Studies of the Human Gastric Mucosa in Vivo
Stewart Wolf, M.D., F.A.C.P., Oklahoma City

11:00 INTERMISSION

11:15 Symposium—Control of Diabetes

Presiding Officer
A. A. Blair, M.D., Governor for Arkansas

1. Dietetic Control of Diabetes
Louis Lambiotte, M.D., Fort Smith (by invitation)
2. Vascular Complications in Relation to Control of Diabetes
Bert F. Keltz, M.D., F.A.C.P., Oklahoma City
3. Use of Insulins
Earl I. Mulmed, M.D., Associate, Tulsa
4. Edward Bortz, M.D., F.A.C.P., Philadelphia Regent of the College

12:15 Dissecting Aneurysm: Clinical Picture
Ben T. Galbraith, M.D., McAlester (by invitation)

12:30 Question and Answer Period

1:00 Luncheon

AFTERNOON SESSION

Presiding Officer
Elmer Musick, M.D., F.A.C.P., Oklahoma City

2:00 The Treatment of the More Common Cardiac Emergencies
W. W. Hamilton, M.D., Little Rock, Ark. (by invitation)

2:15 Clinical Varieties of Hypo-parathyroidism
R. Palmer Howard, M.D., Associate, Oklahoma City
Edward C. Reifenstein, M.D., F.A.C.P., Oklahoma City

2:30 Modern Management of the Diabetic
Edward L. Bortz, M.D., F.A.C.P., Regent of the College, Philadelphia

3:00 INTERMISSION

Presiding Officer
Harry A. Daniels, M.D., F.A.C.P., Oklahoma City

3:15 Symposium: Recent Advances in Cardio-Vascular Diseases

1. Clinical Indications for Valvulotomy
Cecil F. Boulden, M.D., Fort Smith, Ark. (by invitation)
2. Newer Drugs in the Treatment of Hypertension
C. L. Lewis, Jr., M.D., Tulsa (by invitation)
3. Some Practical and Theoretical Considerations in a theroselerosis
Robert H. Furman, M.D., F.A.C.P., Oklahoma City

4:15 Discussion Period

MEDICAL WRITERS' ASSN. WILL FEATURE OKLA. SPEAKERS

Oklahoma physicians are invited to attend the 10th Annual Meeting, American Medical Writers' Ass'n, to be held at the Elk's Club, Springfield, Ill., Sept. 23, under presidency of Lewis J. Moorman, M.D., Editor of the Journal of the Oklahoma Medical Association. The meeting will be held during the 18th Annual Meeting, Mississippi Valley Medical Society (September 23, 24, 25) at the same Club. The program follows:

The morning session will feature a Symposium on Medical Writing by Dr. Julius Jensen, St. Louis; Dr. Stewart G. Wolf, Jr., Oklahoma City; Dr. Theodore R. Van Dellen, Chicago; Dr. Richard M. Hewitt, Rochester, Minn. and Lee D. van Antwerp, Chicago. Also papers on Medical Writing for Medical Students by Dr. Walter R. Bett, London, England and Dr. Dean F. Smiley, Chicago. The afternoon session will feature a Symposium on Medical Writing by a non-medical group of six from the Southern Medical Journal, Mayo Clinic, Illinois State Medical Society and the Universities of Oklahoma and Michigan. The evening sesion will feature a fellowship hour, dinner, presentation of awards and fellowships and an address by Dr. Walter R. Bett of London, the distinguished British Writer and librarian. A detailed program may be secured from Harold Swanberg, M.D., Secretary, W. C. U. Bldg., Quincy, Ill. All concerned with any phase of medical writing are cordially invited. There are no registration fees.

KANSAS CITY CONFERENCE SLATED THIS MONTH

The Kansas City Southwest Clinical Society will present the 31st Annual Conference in the Municipal Auditorium, Kansas City, Mo., September 28—October 1.

In addition to lectures before the general assemblies, these guests will participate in a panel discusion as the closing feature of each afternoon sesion excepting September 29, when the session will close with the clinicopathologic conference.

Color television programs, medical and surgical have been arranged through the courtesy of Smith, Kline & French Labs., who will use two cameras to televise the program from the Kansas City General Hospital to the auditorium, thus preventing any loss of time. They also use two large screens which afford adequate vision for an audience of 500 simultaneously.

LICENSED IN SOUTH DAKOTA?

Physicians licensed in South Dakota are reminded that legislation recently passed has created an annual registration fee of $2.00. If you are licensed in South Dakota and wish to maintain that license, payment of the registration fee should be made to the South Dakota Board of Medical Examiners, 300 First National Bank Bldg., Sioux Falls, South Dakota, by January 1, 1954.

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RURAL HEALTH CONFERENCE TO DRAW DOCTORS, RURAL GROUPS

All physicians are urged to attend the First Oklahoma State Rural Health Conference scheduled for Oklahoma City September 8 and 9 at the Skirvin Hotel.

Purpose of the conference is to bring the rural leaders of Oklahoma together with representatives of the medical profesion and other groups concerned with health problems, for discusions as to the nature of rural health problems existing in Oklahoma and the most effective means by which those problems can be met. The conference is being sponsored by the Oklahoma State Medical Asociation with the following organizations acting as co-sponsors: Extension Service of the University of Oklahoma, Agricultural Extension Service of the Oklahoma A. and M. College, Oklahoma Congress of Parent-Teachers, Oklahoma Home Demonstration Council, Oklahoma Advisory Health Council, Oklahoma Farm Bureau Federation; Oklahoma State Dental Association, and the Oklahoma State Health Department.

The program will be built around the six topics considered of greatest interest to Oklahoma's rural residents.

Majority of the speakers are Oklahomans. However, Aubrey Gates, field director of the Council on Rural Health of the A.M.A. and formerly associate director, Agricultural Extension Service, University of Arkansas, Little Rock, will speak at the dinner meeting September 8 on "Rural Health is Your Business."

Speaking at the luncheon September 9 will be Mrs. Charles W. Sewell, former director, Associated Women, American Farm Bureau Federation, Otterbein, Ind., whose topic will be "Let's Do It Ourselves."

Following a tour of the Oklahoma Medical Research Foundation and the University of Oklahoma Medical Center, during the morning September 8, panel discussions will be held in the afternoon on the following topics:

1. "Organizing Rural Communities to Meet Their Own Health Needs," David Steen, Executive Secretary, Oklahoma Advisory Health Council, Norman.

2. "Multiple Health Screening Tests in Rural Communities," Kirk T. Mosley, M.D., Director, Division of Chronic Diseases, State Health Department; Professor, Preventive Medicine, University of Oklahoma School of Medicine, Oklahoma City.

3. "Nutrition and its Relation to Rural Health in Oklahoma," Miss Mary Leidigh, Nutritionist, Oklahoma A. and M. College, Stillwater, Okla.

4. "Animal Diseases and Their Relation to Rural Health in Oklahoma," J. Wiley Wolff, D.V.M., Professor, and Head of Medicine and Surgery, School of Veterinary Medicine, Oklahoma A. and M. College, Stillwater.

5. "Meeting the Costs of Medical Care of Oklahoma's Farm Families, "Wayne Starkey, M.D., member, Blue Shield Board of Directors, Altus.

6. "How Rural Oklahoma Communities Can Get Physicians," Dick Graham, Executive Secretary, Oklahoma State Medical Association, Oklahoma City.

Wednesday morning's program will be a continuation of the group discusions.

OFFICERS ELECTED

Recently elected officers of the Oklahoma Society of Psychiatrists and Neurologists are: A. A. Hellams, M. D., President; Harry Wilkins, M. D., Vice-President; Charles A. Smith, M.D., Secretary-Treasurer; and Neil Kimerer, M.D., member of the Executive Committee.

HOUSE OF DELEGATES TO MEET OCTOBER 25

The House of Delegates of the Oklahoma State Medical Asociation at the Annual Meeting in Tulsa in April approved the continuation of the holding of a mid-winter meeting of the House of Delegates.

At a meeting of the Council June 21, the time of the meeting was set as October 25. This date is the Sunday immediately preceding the Oklahoma City Clinical Society. The meeting will be an all day sesion, the first part of the meeting being devoted to business of the Association and the balance of the program a discussion of social and economic problems facing the profession.

Any member of the Association is privileged to attend the meeting of the House of Delegates although delegates will be the only ones that are allowed to vote concerning the business affairs of the Association. Official call for the meeting of the House of Delegates will be issued by the Speaker of the House, Clinton Gallaher,, M.D., Shawnee, in the near future.

Delegates who represented their county or district society at the spring meeting will be the authorized delegates for the fall meeting.

SCHOOL HEALTH CONFERENCE SCHEDULED FOR NORMAN

Sponsored by the Oklahoma School Health Administrators' Association, Oklahoma Advisory Health Council, Oklahoma State Health Department and the Oklahoma State Medical Association School Health Committee, the third annual School Health Conference will be held in Norman October 16-17.

Oklahoma physicians are urged to attend the conference because of the opportunity which it gives them to assist in the planning and development of school health programs. As a result, these programs will be more satisfactory to the medical profession, the schools and will produce better results for the children. Physicians are reminded that the conference is scheduled for the weekend of the Oklahoma-Kansas football game in Norman, October 17, and that it is also "Dad's Day" at the University.

Theme of the conference will be a three point program covering the following: 1. Healthful environment; 2. Health education; 3. Health services.

GOVERNOR MURRAY APPOINTS MENTAL HEALTH BOARD

The 24th session of the Oklahoma Legislature repealed the old mental health law and enacted a new one with one of the provisions of the new legislation being the appointment of a board of mental Health composed of two physicians, one attorney and three lay persons. Appointed to the Board by Governor Murray to represent th medical profession were Maud Masterson, M.D., Oklahoma City, and Joe Tyler, M.D., Tulsa.

Governor Murray's appointments were made from a list of names submitted by the Council of the Association.

Both Doctor Tyler and Doctor Masterson served on the Association's committee to assist the House of Representatives in the investigation of the Central State Hospital.

CLAIM REPORT

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GRIEVANCE COMMITTEE ISSUES WARNING ABOUT COLLECTION LETTERS, REFERS ONE CASE TO COUNTY MEDICAL SOCIETY

Press coverage of the recent annual meeting in Tulsa especially regarding the report of the Grievance Committee, as has been the case each year since the creation of the committee, resulted in an increase in the number of complaints filed with the committee in recent months.

Two sessions of the Grievance Committee were held during the Annual Meeting; one meeting has been held since that time and a meeting is scheduled for sometime in September.

Two cases were referred to the Council at its last meeting and the Council authorized the referral of the cases to the county society for disciplinary action and the matter is now pending a hearing of the Board of Censors of the County Society.

At the request of one county medical society, the staff and the board of control of one hospital hospital in the state, the Committee recently completed recommendations for the staff constitution and by-laws of the board of control and rules and regulations for the hospital which were unanimously adopted by the staff and the board of control. It will, it is hoped, be effective in correcting an unsatisfactory condition which had existed in regard to hospital records and regulations between members of the staff.

The Committee wishes to call attention of the membership to the importance of informing themselves as to the type of collection efforts made on their behalf by collection agencies employed by them. This was forcefully brought out in one case presented to the committee in which the following letter from a collection agency was transmitted:

> "Received your sweet letter that you turned the account over to the State Medical Association and I am sure glad as the devil that you did, for the State Medical Association will know that you don't pay your bills, and your record in the ..... Collection Agency, ... Credit Bureau, and Oklahoma Credit Bureau will be absolutely N. G., and what we mean is absolutely N. G., double N. G., as far as we are concerned. You weren't even decent enough to answer any of our letters until a registered letter was sent you, then you got all hot and bothered, etc., etc., etc., so now being as you want to go to bat, we will sure go to bat and I don't mean maybe."

In this particular case, the committee felt that the fees they were attempting to collect were justifiable but that the method used was not to be condoned.

DOCTOR AMSPACHER APPOINTED SCIENTIFIC WORK CHAIRMAN

James Amspacher, M.D., Oklahoma City, an orthopedic surgeon, has been appointed by John E. McDonald, M.D., as chairman of the Scientific Work Committee of the Oklahoma State Medical Association to prepare the scientific program for the Annual Meeting to be held in Oklahoma City May 10, 11, and 12.

Any member of the Association who desires to read a scientific paper or exhibit a scientific subject should immediately contact Doctor Amspacher.

Final selection of speakers and exhibits will be announced after the first of the year.

ON ACTIVE DUTY

Oklahoma physicians who recently entered active duty in the armed forces include:

F. M. Adams, Jr. (Major), Nowata—reported to Ft. Bragg, N. C.

Jerome M. Adams (Lt.), reported to Wm. Beaumont Army Hospital, El Paso, Texas

Joseph C. Canada (Lt. Col.), Tahlequah, reported to Fort Sam Houston, San Antonio, Texas.

Robert M. Gastineau (Lt.), Oklahoma City, Fort Sam Houston

James E. Loucks (Capt.), Oklahoma City, Fort Sam Houston.

David C. Ramsay (Capt.), Ada, Camp Carson, Colo.

Robert E. Walden (Capt.—Air Force), Taft, Fort Sam Houston.

RELEASED FROM SERVICE

According to word received in the Executive Office, the following physicians have been released from service. Where possible, their last military station and present residence is given:

Ben F. Bridges (Capt.), Tulsa, Brookley Air Force Base, Alabama.

John M. Brown (Capt.), Oklahoma City, was stationed in the Far East.

Avalo V. Caldwell, Lawton, was stationed at Fort Sill.

Alan Cameron, Wagoner, was stationed in Germany.

Jenner G. Coil (Capt)., Oklahoma City, released from service at Fort Sill.

Wiley P. Dickenson (Lt.), formerly of Tecumseh, now of Ardmore, was stationed in Germany.

Charles A. Feigley (Capt.), Oklahoma City, stationed at Keesler Air Force Base, Mississippi, when released.

Clarence Robinson, Jr. (Capt.), Oklahoma City, stationed at Warren Air Force Base, Wyoming, when released.

Harry W. Vandever (Lt. jg.), Enid, released from service at Jacksonville Naval Air Training Station, Florida.

Donald E. Wicker, Lawton, served with the U. S. Navy at Camp Lejuene, N. C., aboard the U.S.S. Salem in the Mediterranean and at the U. S. Navy Hospital, Memphis.

HEART CONFERENCE SLATED FOR DENVER IN NOVEMBER

A postgraduate conference in "Clinical Electrocardiography, and Recent Advances in Cardiovascular Diseases" will be held in Denver, Colo., November 9-14. The conference will be sponsored by the Colorado Heart Association, University of Colorado School of Medicine, Fitzsimons Army Hospital and the Colorado Department of Public Health. No registration fee will be charged for the first three days on clinical electrocardiography to be held at Fitzsimons Hospital.

The last two and one-half days will be devoted to recent advances in cardiovascular diseases and out of state physicians will be charged $15.00 for this session to be held at the Cosmopolitan Hotel.

Further inforation can be obtained from Edwin M. Goyette, Col., M.C., Fitzsimons Army Hospital, Denver; or the Colorado Heart Association, 314 14th St., Denver.

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To Members of the Oklahoma State Medical Association

At the last meeting of the House of Delegates, the Executive Office was instructed to approach the Blue Cross Hospital Plan to offer their facilities to the members of the Oklahoma State Medical Association not now enrolled.

Blue Cross has agreed to enroll all members not now enrolled in Blue Cross and under the age of 65, on November 1, 1953.

The cost of the coverage is $24.00 a year for a single person and $50.40 a year for a family, irrespective of the number of children so long as they are unmarried and under the age of 21. Please be certain in filling out the application blank that you list the names of your dependents and their birth dates.

Your application should be returned to the Executive Office, 1227 Classen Drive, Oklahoma City, **not later than October 1.** All contracts will be effective November 1.

No money is to accompany the application, as you will be billed from the Blue Cross office.

We sincerely trust that each physician will take advantage of this coverage, since it will not be possible for you to enroll after October 1, until the group is reopened next year.

REMEMBER, RETURN YOUR MEMBERSHIP APPLICATION
BEFORE OCTOBER 1

Have You Heard?

O. J. Hake, M.D., formerly of Seminole and recently discharged from the army, has joined the Phelps Clinic staff in El Reno.

Richard B. Lincoln, M.D. is now associated with Moorman P. Prosser, M.D., Oklahoma City, and will limit his practice to neurology and diagnostic electroencephalography. Doctor Lincoln was graduated from the University of Oklahoma in 1944, spent three years at Will Rogers V. A. Hospital in internal medicine and has just completed a year at Illinois Neurosychiatric Institute, Chicago, where he has had training in neurology and electroencephalography under Gibbs and Gibbs.

T. H. Henley, M. D., a graduate of the University of Oklahoma, is now practicing in Canton.

G. O. Webb, M.D. has returned to Temple to practice after being associated with veterans hospitals in Arizona for some time.

Ralph R. Heine, M.D., recently discharged from the army, has joined the Community Hospital-Clinic staff at Elk City.

Melvin Fry, M.D., formerly of Tishomingo and Wright City, has recently moved to Checotah.

J. W. Ambrister, M.D., Hobart, is taking a residency in Oklahoma City.

Fred D. Switzer, M.D., formerly of Hugo and more recently of DeQueen, Ark., has joined the McAlester Clinic Staff.

Elizabeth P. Fleming, M.D., is the new health director for Atoka County.

John E. McDonald, M.D., Tulsa, O.S.M.A. president, was quoted in the July *Woman's Home Companion* article, "How Much Should Your Doctor Charge?"

William C. Click, M.D., has joined the Chickasha Hospital and Clinic staff.

O. J. Gee, M.D., Oklahoma City, has been elected National Commander of the Army and Navy Legion of Valor. He holds the Distinguished Service Cross.

STATE HAS 23 NEW PHYSICIANS

According to word received in the Executive Office, at least 23 new physicians have gone into practice in the state during June and July. The majority of the physicians are practicing in rural communities. Among the physicians who have recently opened their practices are:

Jack Alexander, M.D.—Ponca City
Charles E. Baker, M.D.—Ardmore
Lynn C. Barnes, Jr., M.D.—Nowata
Charles E. Beck, M.D.—Lindsay
Eugene S. Bell, M.D.—Tishomingo
Marion D. Christensen, M.D.—Kiowa
William Claude Click, M.D.—Chickasha
David C. Clemans, M.D.—Hartshorne
James W. Coin, Jr., M.D.—Wagoner
J. T. Colwick, Jr., M.D.—Durant
James H. Elliott, M.D.—Nowata
J. Douglas Green, M.D.—Cushing
George A. Hart, M.D.—Cherokee
William L. Hulen, M.D.—Tipton
Willie George Long, M.D.—Purcell
Arnold G. Nelson, M.D.—Chickasha
George R. Randels, M.D.—Hollis
Thomas F. Regan, M.D.—Chickasha
Richard Lee Russell, M.D.—Picher
William L. Shead, M.D.—Norman
Burl E. Stone, M.D.—Anadarko
J. L. Wheeler, M.D.—Oklahoma City
C. J. Womack, M.D.—Wister

FROM THE OKLAHOMA DIVISION, AMERICAN CANCER SOCIETY

The following communication received from the National Office of the American Cancer Society is reprinted, in its entirety, for your information.

FROM: *Medical and Scietific Director*
SUBJECT: *KOCH CANCER TREATMENT*
Rogers vs. Baldor "Florida Circuit Court"

1. The Koch treatment for cancer is perhaps the most widely employed of the unorthodox treatment methods. The *Journal* of the *American Medical Association* and its Bureau of Investigation have repeatedly condemned the promotion of Koch's "Glyoxylide," which does not appear to be based on any generally accepted concept of cancer and which, on analysis by the Federal Food & Drug Administration, does not appear to have any active ingredients.

2. In 1942, the Federal Trade Commission *instituted* litigation against Koch, as did the Food and drug Administration in the same year. The first trial resulted in a hung jury. A second trial in 1946 ended when a juror became ill.

3. In the fall of 1951, Mr. J. T. Rogers of Lutz, Florida filed a claim against Julian Baldor, M.D., for damages in the amount of $150,000 charging malpractice and abandonment. The malpractice charge was based on the fact that Mr. Rogers, suffering from biopsy-proven but apparently localized cancer of the lip, was "treated" by Dr. Baldor, who employed Koch's glyoxylide and diet as the sole treatment method. The cancer continued to grow until it involved the entire lower lip, chin and lymph nodes of the neck, ultimately requiring extensive surgery in the Tampa Municipal Hospital, in the course of which the lower jaw had to be sacrificed.

4. The Circuit Court trial was held in Tampa, Florida, March 2 to March 13, and in the course of it, depositions for the plaintiff by Dr. Alfred Gellhorn of the Francis Delafield Hospital, New York City; Dr. C. P. Rhoads of Memorial Cancer Center, New York City; Dr. Harry M. Nelson, President of the American Cancer Society, and other prominent physicians were presented. The Medical and Scientific Director of the American Cancer Society appeared for the plaintiff, testifying for several hours.

5. The jury's verdict was in favor of the plaintfiff, Rogers, and it awarded $65,000 in damages to him.

6. It is anticipated that this decision will strengthen future efforts of the Food and Drug Administration to prosecute the promotion of the Koch "cure."

Editors note: Each month in this space the Oklahoma Division, American Cancer Society will publish news in the field of cancer control of interest to our readers.

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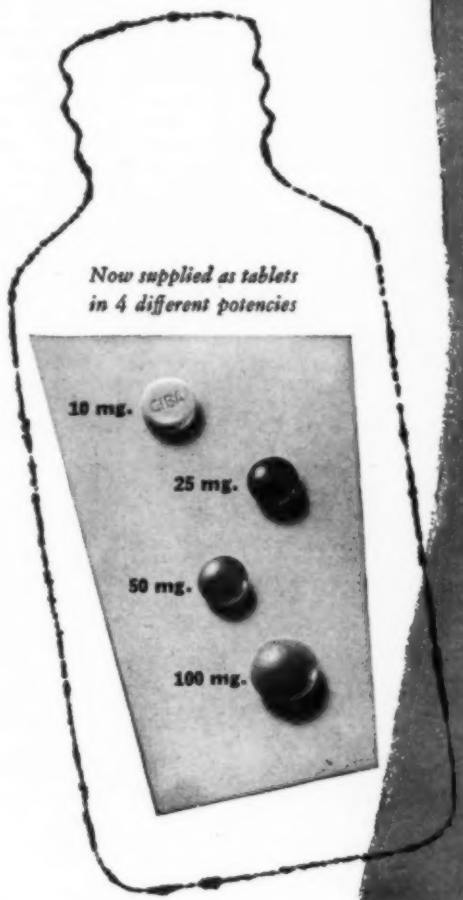

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BOOK REVIEWS

THE PSYCHOLOGY AND PSYCHOTHERAPY OF OTTO RANK by Fay B. Karpf, Ph. D. Published by Philosophical Library, New York.

The author has fulfilled the aims implied in her title in an admirable manner. She presents a brief longitudinal view of Rank's professional life including his introduction to and departure from the Freudian group.

She gives an admittedly critical examination of a few of Freud's most important basic concepts and follows this by an explanation of the reasons for the break from the Freudian school by both Jung and Adler. The major theoretical considerations and therapeutic technics of both Jung and Adler are discussed.

The remainder of the book deals with a more detailed consideration of Rank's theory and therapy. Rank is constantly compared to Freud. The reader discovers that Rank developed his system by attempting to modify and revise certain of Freud's concepts and that this practice led to his separation from the orthodox psychoanalysis.

If the breaks from Freudian psychoanalysis by Adler, Jung and Rank had been presented in chronological sequence, the total story would have unfolded in a more logical fashion and the book would have been more readable.—Robert A. Schneider, M.D.

A MANUAL OF CLINICAL ALLERGY
John M. Shelton, M.D., Robert G. Lovell, M.D. and Kenneth P. Mathews, M.D.

This book barely more than pocket-size contains information which will be useful to the allergist, internist, general practitioner and student. The passages describing the general approach to the allergic patient are particularly helpful and enable one familiar with the material to place laboratory procedures such as skin testing in their proper perspective.

Some of the chapters will be of interest primarily to the allergy specialist. One chapter, for example, contains a beautifully illustrated treatise on pollen morphology.

The criticisms are few and of minor consequence, e.g., the sentence on page 88 which states that,.....prolonged administration of penicillin may be helpful, especially against penicillin-sensitive organisms.'' The term migraine is often used in a broader sense than is ordinarily accepted.

There is a well selected small group of references to the medical literature and to sources where one can obtain materials useful in allergy practice such as allergen proof covers, cotton blankets that are free of wool, etc. —Kelly M. West, Jr., M.D.

DANGER SIGNALS. Warnings of Serious Diseases. By Walter C. Alvarez, M.D., Wilcox and Follett Company, New York, 1953.

Dr. Alvarez undoubtedly had the best of motives in writing *Danger Signals*, but it would seem the book accomplishes very little. Such a work has certain inherent handicaps, and these are faced in the preface by the author's acknowledgment that it will give rise to unfounded anxiety in many readers and that others will error in taking it as a guide for self-diagnosis and treatment. Unfortunately, its greatest appeal probably will be for the very group most likely to fall into those two categories; the majority of the warnings it lists would be self-evident reasons for consulting a physician to other readers.

The chapter on how to find a good doctor is to be commended; but not so are Doctor Alvarez's insufficient regard in this treatise for the general practitioner or for variability in symptomatology and modes of therapy in specific conditions.—Clair Liebrand, M.D.

PSYCHIATRIC DICTIONARY With Encyclopedic Treatment of Modern Terms.
Leland E. Hinsie, M.D. and Jacob Shatzky, Ph. D. Second Edition with Supplement. New York. Oxford University Press. 1953.

To attempt a clear understanding of present day psychiatry is a matter of sustained diligence with little hope of success. Those who approach the task should seek the wisdom of the Bible, the rationality of Dr. Samuel Johnson's Dictionary and the guidance of his prayers. In the latter, this helpful appeal appears; ''Almighty God, in whose hands are all the powers of man . . . be present with me in my studies and inquiries'' and ''. . . appease the tumults of my mind.''

Armed with these safeguards one may hopefully peruse this formidable Hinsie and Shatzky *Psychiatric Dictionary*. The reviewer is confident the compilers share Doctor Johnson's conception of the lexicographer's task whose only hope is to escape reproach. ''He that undertakes to compile a Dictionary, undertakes that, which, if it comprehends the full extent of his design, he knows himself unable to perform.''

The word psychiatry is not in Doctor Johnson's Dictionary but the concept was definitely in his mind. Likewise, it has occupied the minds of all successful physicians through the ages. *Sans* formal training in this special field, the common sense of the good family physician encompassed what the Distionary terms ''psychiatry'' and it was practiced with a surprising degree of success. It is interesting to note that Doctor Johnson's words beginning with ''ps'' are few. The list opens with ''psalm'' and closes with ''pshaw.'' What would be his definition of psychiatry if only he could take a look at humanity today and record his impressions.

Though the authors considered brevity their ideal, their difficulties are revealed by the encyclopedic elucidation of their definitions. This results in an intriguing treatise on the more than 8,000 words, terms and concepts appearing in the volume's 780 odd pages.

The elaborate attempt to give each definition ''vital, clinical and realistic meaning'' reminds one of Doctor Johnson's meticulous methods. In spite of this, one finds himself constantly reading between the lines. This is not surprising since obviously in medicine, and particularly in psychiatry, it is impossible to put everything on the line. This rather discursive discussion of the Dictionary is not to discredit or condemn, but rather to stress the difficulties encountered in this field, failing as it does, between what we know about the body and what we do not know about the mind.

Obviously the soma cannot function without the psyche. Every phase of our behaviour and our total response to environment, plus our acceptance of this Dictionary, hinges upon this intangible something we call psyche. As now classified by psychiatrists, the psyche is considered one of the organs of the body with ''its own form and function, its embryology, its gross and microscopic anatomy, physiology and pathology.'' Considering our present limitations, would it not be better to wait until we can finger Freud's conscious and unconcious divisions of the mind with palpable certainty and slide their numerous components under the microscope for determination of their nature, structure, and pathology.

The Second Edition of the *Psychiatric Dictionary* with its voluminous supplement containing many words not yet familiar to the profession as a whole, represents one of the best available attempts to bridge this chasm

between body and mind.

Considering the current relative importance of psychiatry, with its rapidly growing vocabulary, it behooves every wide awake physician, whether general practitioner or specialist, to have this volume at hand and call it to mind when strange words and incomphensible terms arise.—Lewis J. Moorman, M.D.

ESSENTIALS OF MEDICAL RESEARCH. Wallace Marshall, M.D., Introduction by Thurston Welton, M.D., New York. Vantage Press. 1953. Price $3.00.

Introducing this handy little volume, Thurston Welton, M.D., Editor of the *American Journal of Surgery*, says:

"All who write scientific papers do so because they have done some type of research. It may be based on laboratory or clinical investigation. If an author has done thorough work and knows the art of presenting the results of that work by the written word, his writing will be published for others to read. Alas! In many instances the research has been superficial, a rehash, inept, and the writing not worthy of a seventh-grade schoolboy. We sugest that all young phyisicans read what Dr. Marshall has to offer, and then read other works along similar lines. The result: much drudgery will be taken from the day's work, routine affairs will become an absorbing stimulation, and the practice of medicine and general standard of medical literature will be raised to a much higher plane of excellence."

Here is a treatise not too short to be useful, not too long to be practical and not too dogmatic to be intriguing. It represents the type of writing that guarantees easy reading and presents well washed nuggets of negotiable knowledge.

Strange as it may seem, this small volume contains the essentials of research for all who are interested in the progres of science from the medical student up to the general practitioner and from the general practitioner down to the streamlined specialist.

The author has progressed from chemist, research worker, discoverer and teacher to general practitioner. He writes from the vantage point of general practice where konwledge resulting from scientific research is applied for the benefit of the patient.

The random choice of a few titles from the 29 short chapters sugests what is in store for those who read the book: "The Art of Creating," "Importance of Research in Training Students," "Publicity and Ethics," "Originality, Imagination, and the Five Senses," "Importance of Properly Controlled Studies," "How to Plan Your Research," "How to Review the Literature," "Proper Collection and Presentation of Data," "Medical Statistics," 'How to Prepare Your Report," and "Submitting Your Data for Publication."

The reviewer, who happens to be on the Editorial Board of the *Journal* recommends that every member of the State Medical Asociation read the chapters on preparation of data for publication.—Lewis J. Moorman, M.D.

Current Activities at the Oklahoma Medical Research Foundation

Dr. Charles D. Kochakian, who was formerly Associate Professor of Physiology of the University of Rochester School of Medicine and Dentistry, Rochester, New York, was recently appointed as acting Director of the Oklahoma Medical Research Institute and Hospital. He joined the staff in January, 1951.

Doctor Kochakian is an endocrine physiologist and physiological chemist who is internationally known for his work on hormones, enzymes, nutrition and growth. He has served as a member of the Panel on Hormones, of the Committee on Growth, of the National Research Council. He is also a member of the Panel of Appraisers of the Handbook on Biological Sciences. He was awarded the Claude Bernard Medal and appointed a visiting Claude Bernard Professor of the Institute of Experimental Medicine and Surgery of the University of Montreal on April 27 and 28, 1950. He is also an Associate of the Roscoe Memorial Laboratory, Bar Harbor, Maine.

Doctor Kochakian was born in Haverhill, Mass. He received his A.B. and A.M. degrees in organic chemistry from Boston University, and received his PH.D. in physiological chemistry from the University of Rochester, Rochester, New York. He is a member of a number of national societies.

In Oklahoma he is continuing his research on hormones and growth. In addition, he is in charge of a Central Research Laboratory which is being developed in the Institute and supervises the facilities for animal experimentation as well as the Graduate Training Program. Doctor Kochakian has an appointment as Professor of Research Biochemistry in the University of Oklahoma School of Medicine.

Announcements

OKLAHOMA STATE RURAL HEALTH CONFERENCE. Oklahoma City, Skirvin Hotel, September 8-9.

SOUTHWESTERN SURGICAL CONGRESS. Salt Lake City, September 21-23.

OKLAHOMA CITY CLINICAL SOCIETY. Oklahoma City, Biltmore Hotel, October 26-27-28-29.

SOUTHERN MEDICAL ASSOCIATION. Atlanta, Georgia, October 26-29.

OKLAHOMA STATE HOSPITAL ASSOCIATION. Tulsa, Mayo Hotel, November 10-13.

A.M.A. INTERIM SESSION. St. Louis, December 1-4.

OKLAHOMA ACADEMY OF GENERAL PRACTICE. Tulsa, Tulsa Hotel, February 15-16, 1954.

OKLAHOMA STATE MEDICAL ASSOCIATION. Oklahoma City, Municipal Auditorium, Oklahoma City, May 10-11-12, 1954.

AMERICAN COLLEGE OF SURGEONS. Chicago, October 5-9, Conrad Hilton Hotel.

PAN AMERICAN MEDICAL WOMEN'S ALLIANCE. Fourth congress, Beekman Towers Hotel, First Avenue and 49th St., New York City, September 24 through October 1. Registration should be mailed to Ina A. Marsh, M.D., 140 Linwood Ave., Buffalo 9, New York.

AMERICAN COLLEGE OF PHYSICIANS. Regional meeting, Tulsa, Mayo Hotel, September 19. Complete program appears elsewhere in this issue.

AMERICAN UROLOGICAL ASSOCIATION. New York City, Waldorf-Astoria, May 31—June 3, 1954. For further information concerning the meeting and the essay award write the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. All essays must be in his hands by February 1, 1954.

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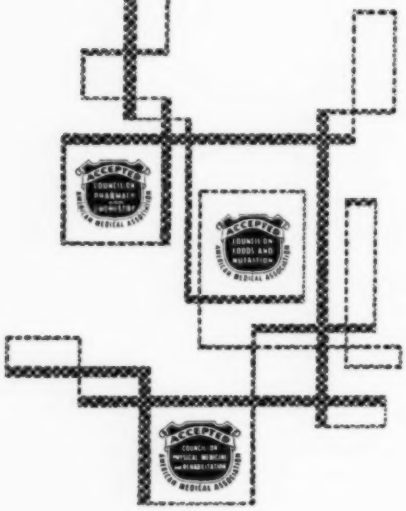

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